ANALYTICAL REPORT

TestAmerica Sample Delivery Group: WC2166

CH2M Hill Plateau Remediation Company

Knittine D. allen

Authorized for release by: 7/31/2017 5:40:37 PM Kristine Allen, Manager of Project Management (253)248-4970 kristine.allen@testamericainc.com

Designee for

Whitney Ritari, Project Manager I (509)375-3131 ext164 whitney.ritari@testamericainc.com

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Expert

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> I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed in this package. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a desingee as verified by the attached signature.

The laboratory is accredited to EPA 7196A in Solid and Chemical Materials, per Washington State Department of Ecology this is approved for non-discharge water samples.

July 31, 2017

Client: CH2M Hill Plateau Remediation Company Project/Site: F17-009

TestAmerica Job ID: 300-5773-1 SDG: WC2166

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Project/Site: F17-009

TestAmerica Job ID: 300-5773-1 SDG: WC2166

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Qualifiers

HPLC/IC

Qualifier	Qualifier Description
N	MS, MSD: Spike recovery is outside acceptance limits.
U	Analyzed for but not detected.
В	Estimated result. Result is less than the RL, but greater than MDL
D	The reported value is from a dilution.

General Chemistry

Qualifier	Qualifier Description
В	Estimated result. Result is less than the RL, but greater than MDL
D	The reported value is from a dilution.
U	Analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

,,,	,,
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
	Arrive British Company (British Company)

MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)

MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if show

PQI	Practical Quantitation	I imit

QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)



Project/Site: F17-009

TestAmerica Job ID: 300-5773-1

SDG: WC2166

Job ID: 300-5773-1

Laboratory: TestAmerica Richland

Narrative

Job Narrative 300-5773-1

Receipt

The samples were received on 7/14/2017 4:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.5° C.

HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

TestAmerica Richland 1/2017

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13

PRINTED ON 6/28/2017

FSR ID = FSR47548

TRVL NUM = TRVL-17-175

A-6003-618 (REV 2)

301/2017

PRINTED ON 6/28/2017

FSR ID = FSR47544

TRVL NUM = TRVL-17-175

A-6003-618 (REV 2)

301/2017

301/2017

PRI	D E	5	RELI	RELI	RELI	
PRINTED ON 6/28/2017	FINAL SAMPLE DISPOSITION	LABORATORY SECTION	RELINQUISHED BY/REMOVED FROM	RELINQUISHED BY/REMOVED FROM	RELINQUISHED BY/REMOVED FROM	CHAIN OF POSSESSION RELINQUISHED BY/REMOV RELINQUISHED BY/REMOV ETL CATTACHOUSHED BY/REMOV RELINQUISHED BY/REMOV RELINQUISHED BY/REMOV
28/2017	DISPOSAL METHOD	RECEIVED BY	MOVED FROM	MOVED FROM	MOVED FROM	MOVED FROM 7/13/2000 PROM 7/13/2000 PROM 1227/1 MOVED FROM MOVED FROM PBS.
			DATE/TIME	DATE/TIME	DATE/TIME	19 14117 (1911) 20 20 1411 3F 114117 20 20 14117 2F 114117 2F 1141
FSR ID = FSR47545			RECEIVED BY/STORED IN	RECEIVED BY/STORED IN	RECEIVED BY/STORED IN	CHAIN OF POSSESSION RELINQUISHED BY/REMOVED FROM 7/13/17/2017/11/15 OF CTL Refylografoy R) LL 7/13/17/11/15 OF CTL RECEIVED BY/STORED IN RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN PATE/TIME RECEIVED BY/STORED
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VL NUM = TRVL-17-175	DISPOSED BY	ппе				TRVL-17-175
A-6003-618 (REV 2)	DATE/TIME	DATE/TIME				·

CH2MHill Plateau Remediation Company

COMPANY CONTACT

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

TELEPHONE NO. 373-7495

PROJECT COORDINATOR

PRICE CODE

□ \$

DATA TURNAROUND

30 Days / 30 Days

301/2017

F17-009-648

PAGE

1 우

AIR QUALITY

FITZGERALD, SL

FITZGERALD, SL

SAMPLING LOCATION

C9497, Core 7, B39LP4

COLLECTOR

P. Brice

ICE CHEST NO.

SHIPPED TO

OFFSITE PROPERTY NO.

FIELD LOGBOOK NO.

PROJECT DESIGNATION

200-DV-1 Operable Unit Characterization of Waste Sites Sampling - Soil 20

ACTUAL SAMPLE DEPTH

COA

METHOD OF SHIPMENT

COVERNMENT VEHICLE

ORIGINAL

company sem =/14/17

302632

BILL OF LADING/AIR BILL NO.

SAF NO. F17-009

80.00-80.00 80.00-80.00

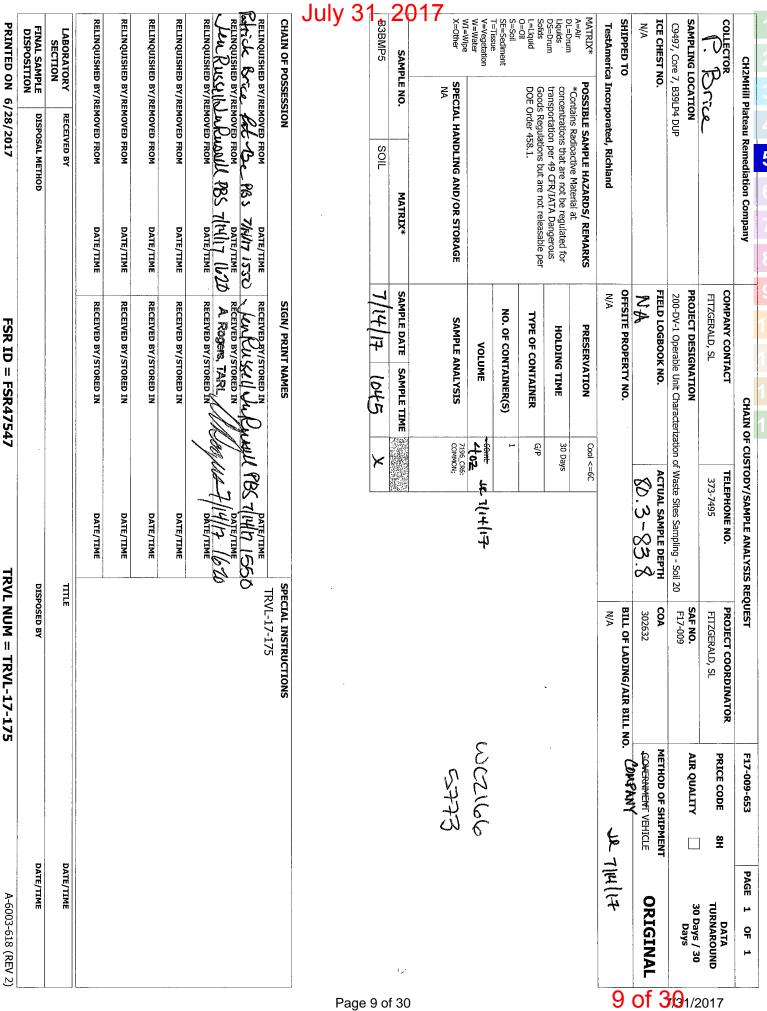
TestAmerica Incorporated, Richland

July 31-3

T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other MATRIX*
A=Air
DL=Drum
Liquids
DS=Drum
Solids
L=Liquid
O=Oil S=Soil SE=Sediment SAMPLE NO. SPECIAL HANDLING AND/OR STORAGE POSSIBLE SAMPLE HAZARDS/ REMARKS Goods Regulations but are not releasable per DOE Order 458.1. transportation per 49 CFR/IATA Dangerous concentrations that are not be regulated for *Contains Radioactive Material at SOIL MATRIX* SAMPLE DATE 中国生 NO. OF CONTAINER(S) TYPE OF CONTAINER SAMPLE ANALYSIS PRESERVATION HOLDING TIME VOLUME SAMPLE TIME で抗 7196_CR6: COMMON; G/P 60mL 30 Days Cool <=6C

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PRINTED ON 6/28/2017	FINAL SAMPLE DISPOSAL METHOD DISPOSITION	LABORATORY RECEIVED BY SECTION	RELINQUISHED BY/REMOVED FROM DATE/TIME	RELINQUISHED BY/REMOVED FROM DATE/TIME	RELINQUISHED BY/REMOVED FROM DATE/TIME		U 7B5 7/
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A-6003-618 (REV 2)	DATE/TIME	DATE/TIME					



PRINTED ON 6/28/2017

FSR ID = FSR47548

TRVL NUM = TRVL-17-175

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company

P. Brice

SAMPLING LOCATION

PROJECT DESIGNATION

200-DV-1 Operable Unit Characterization of Waste Sites Sampling - Soil 20

ACTUAL SAMPLE DEPTH

COA

METHOD OF SHIPMENT

ORIGINAL

AIR QUALITY

30 Days / 30 Days

301/2017

PRICE CODE

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DATA TURNAROUND

F17-009-649

PAGE

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302632

BILL OF LADING/AIR BILL NO.

Company SOVERNMENT VEHICLE **SAF NO.** F17-009

80.3-838

COMPANY CONTACT

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

TELEPHONE NO.

PROJECT COORDINATOR FITZGERALD, SL

373-7495

FITZGERALD, SL

FIELD LOGBOOK NO.

C9497, Core 7, B39LP4

ICE CHEST NO.

Chick Brits

RELINQUISHED BY/REMOVED, FROM

DATE/TIME

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM

DATE/TIME

1 PBS 7/H/17 1550

DATE/TIME

DATE/TIME

RELINQUISHED BY/REMOVED FROM

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CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM

RELINQUISHED BY/REMOVED FROM

RELINQUISHED BY/REMOVED FROM

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

RELINQUISHED BY/REMOVED FROM

SAMPLE NO

SOIL

T=Tissue
V=Vegetation
W=Water
WI=Wipe

A=Air DL=Drum Liquids DS=Drum

MATRIX

POSSIBLE SAMPLE HAZARDS/ REMARKS

PRESERVATION

Cool <=6C

Goods Regulations but are not releasable per DOE Order 458.1. transportation per 49 CFR/IATA Dangerous concentrations that are not be regulated for *Contains Radioactive Material at SHIPPED TO

OFFSITE PROPERTY NO.

TestAmerica Incorporated, Richland

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SPECIAL HANDLING AND/OR STORAGE

Solids L=Liquid O=Oil S=Soil SE=Sediment

MATRIX*

VOLUME

SAMPLE ANALYSIS

SAMPLE DATE | SAMPLE TIME

中国工

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NO. OF CONTAINER(S)

TYPE OF CONTAINER

HOLDING TIME

28 Days/48 Hours G/Þ

SEE ITEM (1)
IN SPECIAL
INSTRUCTIONS Gent 407 THITAGN

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RECEIVED BY/STORED IN A ROGERS, TARL RECETVED BY/STORED IN RECEIVED BY/STORED IN (PBS 1) 11550 (1) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: COMMON (Addbate) on) {Bromide, Phosphorus in phosphate}; DATE/TIME DATE/TIME DATE/TIME DATE/TIME DATE/TIME TRVL-17-175

PRINTED ON 6/28/2017

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

LABORATORY SECTION

RECEIVED BY

FSR ID = FSR47546

 $TRVL\ NUM = TRVL-17-175$

TITLE

DISPOSED BY

A-6003-618 (REV 2)

DATE/TIME

DATE/TIME

IH (17 SPECIAL INSTRUCTIONS TRUL-17-175 Onn) (Bromide, Phosphorus in phosphate); MIP (CD) DATE/TIME	INSTRUCTIONS INSTR	SAMPLE DATE SAMPLE TIME 7/(+/(7) 10 45 RECEIVED BY/STORED IN RECEIVED BY/STORED IN	MATRIX* S. DATE/TIME DATE/TIME DATE/TIME DATE/TIME DATE/TIME DATE/TIME DATE/TIME DATE/TIME	SOIL SOIL SOIL SOIL REMOVED FROM REMOVED FROM REMOVED FROM REMOVED FROM REMOVED FROM REMOVED FROM RECEIVED BY DISPOSAL METHO	CHAIN OF POSSI RELINQUISHED BY
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	2015054		MATRIX*		3BM
	ENESONA!		MATRIX*	PLE NO.	SAM
	INSTRUCTIONS				
	SEE ITEM (1)	SAMPLE ANALYSIS	ND/OR STORAGE	SPECIAL HANDLING AND/OR STORAGE NA	X=Other
WCZ166	403 JE 7(14/17	VOLUME	-		V=Vegetation W=Water
WC2166		NO. OF CONTAINER(S)			S=Soil SE=Sediment T=Tissue
	G/P	TYPE OF CONTAINER	re not releasable per	Goods Regulations but are not releasable per DOE Order 458.1.	Solids L=Liquid O=Oil
	28 Days/48 Hours	HOLDING TIME	not be regulated for R/IATA Dangerous	concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous	Liquids DS=Drum
	Cool <=6C	PRESERVATION	ZARDS/ REMARKS aterial at	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at	MATRIX* A=Air
		N/A	"	TestAmerica Incorporated, Richland	TestAmer
BILL OF LADING/AIR BILL NO. COMPANY		OFFSITE PROPERTY NO.			SHIPPED TO
93. S 302632 METHOD OF SHIPMENT ORIGINAL GOVERNMENT VEHICLE ORIGINAL	ACTUAL SAMPLE DEPTH $80.3-93.8$	FIELD LOGBOOK NO.	18.44.	NO.	ICE CHEST NO. N/A
SAF NO. AIR QUALITY 30 Days / 30 Days mpling - Soil 20 F17-009 Days	rization of Waste Sites Sam	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Sampling - Soil 20		SAMPLING LOCATION C9497, Core 7, B39LP4 DUP	SAMPLING C9497, Cor
PROJECT COORDINATOR PRICE CODE 8H FITZGERALD, SL	TELEPHONE NO. 373-7495	COMPANY CONTACT FITZGERALD, SL		CTOR Sorice	COLLECTOR (S)
REQ	CHAIN OF CUSTODY/SAMPLE ANALYSIS		on Company	CH2MHill Plateau Remediation Company	<u></u>

TRVL NUM = TRVL-17-175

PRINTED ON 6/28/2017

A-6003-618 (REV 2)

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FINAL SAMPLE DISPOSITION	LABORATORY SECTION	RELINQUISHED BY/REMOVED FROM	RELINQUISHED BY/REMOVED FROM	RELINQUISHED BY/REMOVED FROM	RELINQUISHED BY/REMOVED FROM	July 3	B3BMN6	SAMPLE NO.		V=Vegetation W=Water	S=Soil SE=Sediment T=Tissue	Solids L=Liquid O=Oil	Liquids DS=Drum		TestAmerica Incorporated, Richland	SHIPPED TO	N/A	ICE CHEST NO.	SAMPLING LOCATION C9497, Core 4, B39LN8	7 .	COLLECTOR	СН2М
		BY/REMOVED	BY/REMOVED	BY/REMOVED	SESSION BY/REMOVED BY/REMOVED BY/REMOVED BY/REMOVED BY/REMOVED BY/REMOVED			NO.	SPECIAL HA			Goods Regulation DOE Order 458.1	concentration	*Contains Ra	Incorporate				CATION , B39LN8	Brie		Hill Plateau
DISPOSAL METHOD	RECEIVED BY	FROM	FROM	FROM	7 2 0 .		SOIL		NDLING ANI			ations but are 58.1.	ns that are not n per 49 CFR/	OSSIBLE SAMPLE HAZARDS/ *Contains Radioactive Material at	d, Richland							CH2MHill Plateau Remediation Company
		DATE/TIME	DATE/TIME	DATE/TIME	CHAIN OF POSSESSION RELINQUISHED BY/REMOVED FROM DATE/TIME			MATRIX*	SPECIAL HANDLING AND/OR STORAGE NA			Goods Regulations but are not releasable per DOE Order 458.1.	concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at								n Company
					SIGN/ PR RECEIVED RECEIVED RECEIVED RECEIVED RECEIVED RECEIVED RECEIVED		7(13/17	SAMPLE DATE	SAMPI		NO. OF	TYPE O	HOL	PRES	N/A	OFFSITE PROPERTY NO		FIELD LOGBOOK NO.	200-DV-1 Op	FITZGERALD, SL	COMPANY CONTACT	1
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					IN RUDON POS		×	ΛΕ Α	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	462 V	ъ	G/P	28 Days/48 Hours	Cool <=6C		-	ē	ACT	terization of Was	37	直	N OF CUSTODY
		DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME 7/13/17 150 DATE/TIME 7/14/17 140 DATE/TIME					11/21/17 #							65.3-68.8	ACTUAL SAMPLE DEPTH	ROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Sampling - Soil 20	373-7495	TELEPHONE NO.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST
DISPOSED BY	шпе				SPECIAL INSTRUCTIONS TRVL-17-175 (1) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: COMMON (Addon) {Bromide, Phosphorus in phosphate};				ı						N/A	BILL OF LADING/AIR BILL NO.	302632	COA	SAF NO. F17-009	FITZGERALD, SL	PROJECT COORDINATOR	REQUEST
					MMON; 300.0_ANIONS_s in phosphate};							SttS	17227			PNAGNO	COVERNMENT-VEHICLE	METHOD OF SHIPMENT	AIR QUALITY	PRICE CODE		F17-009-644
DATE/TIME	DATE/TIME				IC: COMMON (Add-							<u>ک</u>	99		1.00 to	N 2/12/15	ORIGINAL		Days	TURNAROUND	DATA	PAGE 1 OF 1
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	SPECIAL INSTRUCTIONS
	TRVI -17-175
DATE/TIME	(1) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: COMMON (Add-
	(a) (Bromido Dhoenhorie in phoenhate)
DATE/TIME	on) {bioinide, mosphorus in priosphate},

ппь				LABORATORY RECEIVED BY SECTION
	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RELINQUISHED BY/REMOVED FROM
	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RELINQUISHED BY/REMOVED FROM
	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RELINQUISHED BY/REMOVED FROM
9	DATE/TIME	A ROSER, TARI AND PRECEIVED BY/STORED IN THE	7/14/17 1/20	RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN 1/20/1/14 1/2/ DATE/TIME
	PBS 7/14/17 1410	LUNGUSSUI JURUMUL PBS 7/14/17 1410 RECEIVED BY STORED IN A DATE TIME	7 SI4 7 4 D	ETT RUTTE BYREMOVED FROM RELINOUISHED BYREMOVED FROM RELINOUISHED BYREMOVED FROM DATE/TIME
(1) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_ion) {Bromide, Phosphorus in phosphate};	DATE/TIME 1/3/17 1500	GTL REMOVED IN RILL 1/13/17/1500	THATTY ISON	LINGUISHED BY/REMOVED FROM (17) I DATE/TIME LINGUISHED BY/REMOVED FROM (17) I DATE/TIME BELTHOLISHED BY/REMOVED FROM (17) I DATE/TIME BELTHOLISHED BY/REMOVED FROM (17) I DATE/TIME
SPECIAL INSTRUCTIONS TRVL-17-175		SIGN/ PRINT NAMES	11/21/12/12	CHAIN OF POSSESSION
				July
				3
	×	7/13/17 0930		83BMM9 SOIL
		SAMPLE DATE SAMPLE TIME	MATRIX*	SAMPLE NO.

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

PRINTED ON 6/28/2017

DISPOSED BY

DATE/TIME

A-6003-618 (REV 2)

DATE/TIME

2017

T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

SPECIAL HANDLING AND/OR STORAGE

SAMPLE ANALYSIS

402 SEE ITEM (1) IN SPECIAL INSTRUCTIONS

₹

S=Soil SE=Sediment

NO. OF CONTAINER(S)

मोटार स

VOLUME

TYPE OF CONTAINER

G/P

HOLDING TIME

28 Days/48 Hours

A=Air
DL=Drum
Liquids
DS=Drum
Solids
L=Liquid
O=Oil

Goods Regulations but are not releasable per DOE Order 458.1. transportation per 49 CFR/IATA Dangerous concentrations that are not be regulated for *Contains Radioactive Material at MATRIX*

POSSIBLE SAMPLE HAZARDS/ REMARKS

PRESERVATION

Cool <=6C

मिश्राम अर

TestAmerica Incorporated, Richland



Project/Site: F17-009

TestAmerica Job ID: 300-5773-1

SDG: WC2166

Client Sample ID: B3BMR1 Lab Sample ID: 300-5773-1

Analyte	Result Qualifier	RL	MDL Unit	Dil Fac D Method	Prep Type
Cr (VI)	0.27 B	2.0	0.15 mg/Kg	1 7196A	Total/NA

Lab Sample ID: 300-5773-2 Client Sample ID: B3BMM8

No Detections.

Client Sample ID: B3BMN5 Lab Sample ID: 300-5773-3

No Detections.

Client Sample ID: B3BMP0 Lab Sample ID: 300-5773-4

No Detections.

Lab Sample ID: 300-5773-5 Client Sample ID: B3BMP5

No Detections.

Client Sample ID: B3BMR2 Lab Sample ID: 300-5773-6

Analyte	Result C	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	73		2.1	1.1	mg/Kg		₩	300.0	Soluble
Nitrate as N	430 E)	3.0	1.5	mg/Kg	10	₩	300.0	Soluble
Fluoride	0.28 E	3	0.53	0.26	mg/Kg	1	₩	300.0	Soluble
Nitrite as N	15		0.40	0.20	mg/Kg	1	₩	300.0	Soluble
Orthophosphate as P	400 N	N D	4.3	2.2	mg/Kg	5	₩	300.0	Soluble
Sulfate	130		2.6	1.3	mg/Kg	1	₩	300.0	Soluble
Bromide	2.2		1.3	0.66	mg/Kg	1	☼	300.0	Soluble

Client Sample ID: B3BMP1 Lab Sample ID: 300-5773-7

Analyte	Result Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	22	2.0	1.0	mg/Kg	1	₩	300.0	Soluble
Nitrate as N	72 D	0.57	0.28	mg/Kg	2	₩	300.0	Soluble
Fluoride	7.0	0.51	0.25	mg/Kg	1	₩	300.0	Soluble
Nitrite as N	0.44	0.39	0.19	mg/Kg	1	₩	300.0	Soluble
Orthophosphate as P	130 N	0.83	0.42	mg/Kg	1	₩	300.0	Soluble
Sulfate	37	2.5	1.3	mg/Kg	1	₩	300.0	Soluble
Bromide	0.91 B	1.3	0.63	mg/Kg	1	₩.	300.0	Soluble

Client Sample ID: B3BMP6 Lab Sample ID: 300-5773-8

Analyte	Result Qualif	fier RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	21	2.0	1.0	mg/Kg		₩	300.0	Soluble
Nitrate as N	70 D	0.57	0.29	mg/Kg	2	₩	300.0	Soluble
Fluoride	6.9	0.51	0.25	mg/Kg	1	₩	300.0	Soluble
Nitrite as N	0.43	0.39	0.19	mg/Kg	1	ψ	300.0	Soluble
Orthophosphate as P	130 N	0.83	0.42	mg/Kg	1	₩	300.0	Soluble
Sulfate	36	2.5	1.3	mg/Kg	1	₩	300.0	Soluble
Bromide	0.91 B	1.3	0.64	mg/Kg	1	æ	300.0	Soluble

This Detection Summary does not include radiochemical test results.



Project/Site: F17-009

TestAmerica Job ID: 300-5773-1

Lab Sample ID: 300-5773-9

SDG: WC2166

Client Sample ID: B3BMN6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14		2.0	1.0	mg/Kg	1	₩	300.0	Soluble
Nitrate as N	12		0.28	0.14	mg/Kg	1	₩	300.0	Soluble
Fluoride	0.31	В	0.51	0.25	mg/Kg	1	₩	300.0	Soluble
Nitrite as N	0.30	В	0.39	0.19	mg/Kg	1	₽	300.0	Soluble
Orthophosphate as P	56	N	0.83	0.42	mg/Kg	1	₩	300.0	Soluble
Sulfate	17		2.5	1.3	mg/Kg	1	₩	300.0	Soluble

Client Sample ID: B3BMM9	Lab Sample ID: 300-5773-10

Analyte	Result Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.8	2.0	1.0	mg/Kg		艾	300.0	Soluble
Nitrate as N	0.63	0.28	0.14	mg/Kg	1	₩	300.0	Soluble
Fluoride	0.45 B	0.51	0.25	mg/Kg	1	₩	300.0	Soluble
Sulfate	15	2.5	1.3	ma/Ka	1	₩.	300.0	Soluble

This Detection Summary does not include radiochemical test results.

Project/Site: F17-009

TestAmerica Job ID: 300-5773-1

SDG: WC2166

Matrix: Solid

Client Sample ID: B3BMR1 Lab Sample ID: 300-5773-1 Date Collected: 07/14/17 13:00

Matrix: Solid

Date Received: 07/14/17 16:20

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Analyte	Result	Qualifier	RL	MDL (Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.27	В	2.0	0.15 r	mg/Kg		07/19/17 07:08	07/19/17 08:00	1

Lab Sample ID: 300-5773-2 Client Sample ID: B3BMM8

Date Collected: 07/13/17 09:30 **Matrix: Solid**

Date Received: 07/14/17 16:20

General Chemistry Analyte Result Qualifier **MDL** Unit Prepared RL Analyzed Dil Fac Cr (VI) 0.15 U 2.0 07/19/17 07:08 07/19/17 08:00 0.15 mg/Kg

Client Sample ID: B3BMN5 Lab Sample ID: 300-5773-3

Date Collected: 07/13/17 12:30 **Matrix: Solid**

Date Received: 07/14/17 16:20

General Chemistry Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 0.15 mg/Kg Cr (VI) 0.15 U 20 07/19/17 07:08 07/19/17 08:00

Client Sample ID: B3BMP0 Lab Sample ID: 300-5773-4

Date Collected: 07/14/17 10:45 Date Received: 07/14/17 16:20

General Chemistry Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Cr (VI) 0.15 U 2.0 07/19/17 07:08 07/19/17 08:00 0.15 mg/Kg

Lab Sample ID: 300-5773-5 Client Sample ID: B3BMP5 Matrix: Solid

Date Collected: 07/14/17 10:45 Date Received: 07/14/17 16:20

General Chemistry Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Cr (VI) 0.15 U 2.0 0.15 mg/Kg 07/19/17 07:08 07/19/17 08:00

Client Sample ID: B3BMR2 Lab Sample ID: 300-5773-6

Date Collected: 07/14/17 13:00

Matrix: Solid Date Received: 07/14/17 16:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	73		2.1	1.1	mg/Kg	<u> </u>		07/18/17 18:42	1
Nitrate as N	430	D	3.0	1.5	mg/Kg	₩		07/20/17 13:17	10
Fluoride	0.28	В	0.53	0.26	mg/Kg	☼		07/18/17 18:42	1
Nitrite as N	15		0.40	0.20	mg/Kg	ф.		07/18/17 18:42	1
Orthophosphate as P	400	N D	4.3	2.2	mg/Kg	₩		07/18/17 20:57	5
Sulfate	130		2.6	1.3	mg/Kg	☼		07/18/17 18:42	1
Bromide	2.2		1.3	0.66	mg/Kg	.		07/18/17 18:42	1



Project/Site: F17-009

TestAmerica Job ID: 300-5773-1 SDG: WC2166

Lab Sample ID: 300-5773-7

Matrix: Solid

Matrix: Solid

Matrix: Solid

Client Sample ID: B3BMP1

Date Collected: 07/14/17 10:45 Date Received: 07/14/17 16:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22		2.0	1.0	mg/Kg	<u> </u>		07/18/17 18:57	1
Nitrate as N	72	D	0.57	0.28	mg/Kg	₩		07/18/17 21:12	2
Fluoride	7.0		0.51	0.25	mg/Kg	☼		07/18/17 18:57	1
Nitrite as N	0.44		0.39	0.19	mg/Kg			07/18/17 18:57	1
Orthophosphate as P	130	N	0.83	0.42	mg/Kg	☼		07/18/17 18:57	1
Sulfate	37		2.5	1.3	mg/Kg	☼		07/18/17 18:57	1
Bromide	0.91	В	1.3	0.63	mg/Kg	.		07/18/17 18:57	1

Client Sample ID: B3BMP6 Lab Sample ID: 300-5773-8

Date Collected: 07/14/17 10:45

Date Received: 07/14/17 16:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21		2.0	1.0	mg/Kg	- -		07/18/17 19:42	1
Nitrate as N	70	D	0.57	0.29	mg/Kg	₩		07/18/17 21:58	2
Fluoride	6.9		0.51	0.25	mg/Kg	₩		07/18/17 19:42	1
Nitrite as N	0.43		0.39	0.19	mg/Kg	φ		07/18/17 19:42	1
Orthophosphate as P	130	N	0.83	0.42	mg/Kg	₩		07/18/17 19:42	1
Sulfate	36		2.5	1.3	mg/Kg	₩		07/18/17 19:42	1
Bromide	0.91	В	1.3	0.64	mg/Kg			07/18/17 19:42	1

Client Sample ID: B3BMN6 Lab Sample ID: 300-5773-9

Date Collected: 07/13/17 12:30 Date Received: 07/14/17 16:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		2.0	1.0	mg/Kg	-		07/18/17 19:57	1
Nitrate as N	12		0.28	0.14	mg/Kg	₩		07/18/17 19:57	1
Fluoride	0.31	В	0.51	0.25	mg/Kg	₩		07/18/17 19:57	1
Nitrite as N	0.30	В	0.39	0.19	mg/Kg	₩.		07/18/17 19:57	1
Orthophosphate as P	56	N	0.83	0.42	mg/Kg	☼		07/18/17 19:57	1
Sulfate	17		2.5	1.3	mg/Kg	₩		07/18/17 19:57	1
Bromide	0.64	Ū	1.3	0.64	mg/Kg	ф		07/18/17 19:57	1

Client Sample ID: B3BMM9

Date Collected: 07/13/17 09:30

Lab Sample ID: 300-5773-10

Matrix: Solid

Date Received: 07/14/17 16:20

Analyte	Result Qua	alifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.8	2.0	1.0	mg/Kg	₩.		07/18/17 20:12	1
Nitrate as N	0.63	0.28	0.14	mg/Kg	₩		07/18/17 20:12	1
Fluoride	0.45 B	0.51	0.25	mg/Kg	₩		07/18/17 20:12	1
Nitrite as N	0.19 UN	0.39	0.19	mg/Kg			07/18/17 20:12	1
Orthophosphate as P	0.42 U N	0.83	0.42	mg/Kg	☼		07/18/17 20:12	1
Sulfate	15	2.5	1.3	mg/Kg	☼		07/18/17 20:12	1
Bromide	0.64 U	1.3	0.64	mg/Kg			07/18/17 20:12	1

Project/Site: F17-009

TestAmerica Job ID: 300-5773-1

SDG: WC2166

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-8608/1-A

Lab Sample ID: LCS 300-8608/2-A

Matrix: Solid

Analysis Batch: 8611

Client Sample ID: Method Blank

Prep Type: Soluble

MB MB

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.14	U	0.28	0.14	mg/Kg			07/18/17 18:12	1
Nitrite as N	0.19	U	0.38	0.19	mg/Kg			07/18/17 18:12	1
Orthophosphate as P	0.41	U	0.81	0.41	mg/Kg			07/18/17 18:12	1

Client Sample ID: Lab Control Sample Prep Type: Soluble

Client Sample ID: B3BMP1

Client Sample ID: B3BMP1

Client Sample ID: B3BMP1

Client Sample ID: Method Blank

Prep Type: Soluble

Prep Type: Soluble

Prep Type: Soluble

Prep Type: Soluble

Matrix: Solid

Analysis Batch: 8611

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits Nitrate as N 22.4 22.4 80 - 120 mg/Kg 100 30.2 Nitrite as N 30.4 mg/Kg 101 80 - 120 Orthophosphate as P 64.9 63.7 mg/Kg 98 80 - 120

Lab Sample ID: 300-5773-7 MS Client Sample ID: B3BMP1 **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 8611

Sample Sample Spike MS MS %Rec. Result Qualifier Added Limits Analyte Result Qualifier Unit D %Rec ☼ Nitrite as N 31.1 0.44 31.3 mg/Kg 99 75 - 125

Lab Sample ID: 300-5773-7 MS

Matrix: Solid

Analysis Batch: 8611

-	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Nitrate as N	72	D	23.1	93.9	D	mg/Kg	₩	96	75 - 125	
Orthophosphate as P	130	ВD	66.7	185	D	mg/Kg	≎	82	75 - 125	

Lab Sample ID: 300-5773-7 DU

Matrix: Solid

Analysis Batch: 8611

	Sample	Sample	DU	DU					RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	F	RPD	Limit
Nitrite as N	0.44		0.431		mg/Kg	₩		3	30
Orthophosphate as P	130	N	125		mg/Kg	₩		2	30

Lab Sample ID: 300-5773-7 DU

Matrix: Solid

Analysis Batch: 8611

DU DU **RPD** Sample Sample Analyte Result Qualifier Result Qualifier Unit Limit 72 D Nitrate as N 70.1 D mg/Kg

Lab Sample ID: MB 300-8608/1-A

Matrix: Solid

Analysis Batch: 8612

MB MB

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Chloride 1.0 U 2.0 07/18/17 18:12 1.0 mg/Kg

Project/Site: F17-009

TestAmerica Job ID: 300-5773-1

SDG: WC2166

Method: 300.0 - Anions, Ion Chromatography (Continued)

MR MR

Lab Sample ID: MB 300-8608/1-A

Matrix: Solid

Analysis Batch: 8612

Client Sample ID: Method Blank

Prep Type: Soluble

MDL Unit Analyte Result Qualifier RL Prepared Analyzed Dil Fac Fluoride 0.25 U 0.50 0.25 mg/Kg 07/18/17 18:12 Sulfate 1.2 U 2.5 1.2 mg/Kg 07/18/17 18:12 0.62 U **Bromide** 1.2 0.62 mg/Kg 07/18/17 18:12

Lab Sample ID: LCS 300-8608/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 8612

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit D %Rec Limits Chloride 159 156 mg/Kg 98 80 - 120 Fluoride 39.8 39.4 99 80 - 120 mg/Kg Sulfate 199 198 80 - 120 mg/Kg 99 **Bromide** 99.4 99.2 mg/Kg 100 80 - 120

Lab Sample ID: 300-5773-7 MS Client Sample ID: B3BMP1 **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 8612

Spike MS MS %Rec. Sample Sample **Analyte** Result Qualifier Added Result Qualifier Unit D %Rec Limits ₩ Chloride 22 164 182 98 75 - 125 mg/Kg ☼ 7.0 40.9 Fluoride 47.3 mg/Kg 99 75 - 125Sulfate 37 204 241 mq/Kq ₩ 100 75 - 12575 - 125 0.91 B 102 101 **Bromide** mg/Kg 98

Lab Sample ID: 300-5773-7 DU Client Sample ID: B3BMP1 **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 8612

Sample Sample DU DU **RPD** RPD Analyte Result Qualifier Result Qualifier ח Limit Unit ₩ 22 Chloride 21.4 mg/Kg 3 30 ₩ Fluoride 7.0 6.85 mg/Kg 2 30 ₩ Sulfate 37 35.3 mg/Kg 30 Ö **Bromide** 0.91 B 0.905 B mg/Kg 30

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 300-8625/1-A Client Sample ID: Method Blank Prep Type: Total/NA

Matrix: Solid Analysis Batch: 8641

MR MR Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 20

Cr (VI) 0.15 U 0.15 mg/Kg 07/19/17 07:08 07/19/17 08:00

Lab Sample ID: LCS 300-8625/2-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA Prep Batch: 8625 **Analysis Batch: 8641**

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Limits 20.0 Cr (VI) 18.91 94 85 - 115 mg/Kg

TestAmerica Richland

Prep Batch: 8625



Project/Site: F17-009

Cr (VI)

TestAmerica Job ID: 300-5773-1

75 - 125

99

SDG: WC2166

Method: 7196A - Chromium, Hexavalent (Continued)

0.27 B

ı	Lab Sample ID: 300-5773-1	MS							Clien	it Sample I	ID: B3BMR1
	Matrix: Solid									Prep Typ	pe: Total/NA
	Analysis Batch: 8641									Prep	Batch: 8625
	-	Sample	Sample	Spike	MS	MS				%Rec.	
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Cr (VI)	0.27	В	29.9	26.88		mg/Kg		89	75 - 125	

669.5 D

mg/Kg

Lab Sample ID: 300-5773-1 M Matrix: Solid Analysis Batch: 8641	ISI							Client	Sample ID: B3BMR1 Prep Type: Total/NA Prep Batch: 8625
	Sample	Sample	Spike	MSI	MSI				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits

Lab Sample ID: 300-5	773-1 DU		Client Sample ID: B3BMR1
Matrix: Solid			Prep Type: Total/NA
Analysis Batch: 8641			Prep Batch: 8625
	Sample Sample	ווח ווח	RPD

675

	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Cr (VI)	0.27	В	0.356	В	mg/Kg		 28	35

Project/Site: F17-009

TestAmerica Job ID: 300-5773-1

SDG: WC2166

HPLC/IC

Leach Batch: 8608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-5773-6	B3BMR2	Soluble	Solid	DI Leach	
300-5773-7	B3BMP1	Soluble	Solid	DI Leach	
300-5773-8	B3BMP6	Soluble	Solid	DI Leach	
300-5773-9	B3BMN6	Soluble	Solid	DI Leach	
300-5773-10	B3BMM9	Soluble	Solid	DI Leach	
MB 300-8608/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 300-8608/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
300-5773-7 MS	B3BMP1	Soluble	Solid	DI Leach	
300-5773-7 DU	B3BMP1	Soluble	Solid	DI Leach	

Analysis Batch: 8611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-5773-6	B3BMR2	Soluble	Solid	300.0	8608
300-5773-6	B3BMR2	Soluble	Solid	300.0	8608
300-5773-7	B3BMP1	Soluble	Solid	300.0	8608
300-5773-7	B3BMP1	Soluble	Solid	300.0	8608
300-5773-8	B3BMP6	Soluble	Solid	300.0	8608
300-5773-8	B3BMP6	Soluble	Solid	300.0	8608
300-5773-9	B3BMN6	Soluble	Solid	300.0	8608
300-5773-10	B3BMM9	Soluble	Solid	300.0	8608
MB 300-8608/1-A	Method Blank	Soluble	Solid	300.0	8608
LCS 300-8608/2-A	Lab Control Sample	Soluble	Solid	300.0	8608
300-5773-7 MS	B3BMP1	Soluble	Solid	300.0	8608
300-5773-7 MS	B3BMP1	Soluble	Solid	300.0	8608
300-5773-7 DU	B3BMP1	Soluble	Solid	300.0	8608
300-5773-7 DU	B3BMP1	Soluble	Solid	300.0	8608

Analysis Batch: 8612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-5773-6	B3BMR2	Soluble	Solid	300.0	8608
300-5773-7	B3BMP1	Soluble	Solid	300.0	8608
300-5773-8	B3BMP6	Soluble	Solid	300.0	8608
300-5773-9	B3BMN6	Soluble	Solid	300.0	8608
300-5773-10	ВЗВММ9	Soluble	Solid	300.0	8608
MB 300-8608/1-A	Method Blank	Soluble	Solid	300.0	8608
LCS 300-8608/2-A	Lab Control Sample	Soluble	Solid	300.0	8608
300-5773-7 MS	B3BMP1	Soluble	Solid	300.0	8608
300-5773-7 DU	B3BMP1	Soluble	Solid	300.0	8608

Analysis Batch: 8644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-5773-6	B3BMR2	Soluble	Solid	300.0	8608

General Chemistry

Prep Batch: 8625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-5773-1	B3BMR1	Total/NA	Solid	3060A	
300-5773-2	B3BMM8	Total/NA	Solid	3060A	
300-5773-3	B3BMN5	Total/NA	Solid	3060A	



Project/Site: F17-009

TestAmerica Job ID: 300-5773-1

SDG: WC2166

General Chemistry (Continued)

Prep Batch: 8625 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-5773-4	B3BMP0	Total/NA	Solid	3060A	
300-5773-5	B3BMP5	Total/NA	Solid	3060A	
MB 300-8625/1-A	Method Blank	Total/NA	Solid	3060A	
LCS 300-8625/2-A	Lab Control Sample	Total/NA	Solid	3060A	
300-5773-1 MS	B3BMR1	Total/NA	Solid	3060A	
300-5773-1 MSI	B3BMR1	Total/NA	Solid	3060A	
300-5773-1 DU	B3BMR1	Total/NA	Solid	3060A	

Analysis Batch: 8629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-5773-6	B3BMR2	Total/NA	Solid	Moisture	
300-5773-7	B3BMP1	Total/NA	Solid	Moisture	
300-5773-8	B3BMP6	Total/NA	Solid	Moisture	
300-5773-9	B3BMN6	Total/NA	Solid	Moisture	
300-5773-10	B3BMM9	Total/NA	Solid	Moisture	

Analysis Batch: 8641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-5773-1	B3BMR1	Total/NA	Solid	7196A	8625
300-5773-2	B3BMM8	Total/NA	Solid	7196A	8625
300-5773-3	B3BMN5	Total/NA	Solid	7196A	8625
300-5773-4	B3BMP0	Total/NA	Solid	7196A	8625
300-5773-5	B3BMP5	Total/NA	Solid	7196A	8625
MB 300-8625/1-A	Method Blank	Total/NA	Solid	7196A	8625
LCS 300-8625/2-A	Lab Control Sample	Total/NA	Solid	7196A	8625
300-5773-1 MS	B3BMR1	Total/NA	Solid	7196A	8625
300-5773-1 MSI	B3BMR1	Total/NA	Solid	7196A	8625
300-5773-1 DU	B3BMR1	Total/NA	Solid	7196A	8625

Project/Site: F17-009

TestAmerica Job ID: 300-5773-1 SDG: WC2166

Lab Sample ID: 300-5773-1

Matrix: Solid

Client Sample ID: B3BMR1 Date Collected: 07/14/17 13:00 Date Received: 07/14/17 16:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3060A			2.5013 g	100 mL	8625	07/19/17 07:08	HR	TAL RCH
Total/NA	Analysis	7196A		1			8641	07/19/17 08:00	HR	TAL RCH

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Client Sample ID: B3BMM8 Lab Sample ID: 300-5773-2

Date Collected: 07/13/17 09:30 Date Received: 07/14/17 16:20

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3060A			2.5199 g	100 mL	8625	07/19/17 07:08	HR	TAL RCH
Total/NA	Analysis	7196A		1			8641	07/19/17 08:00	HR	TAL RCH

Client Sample ID: B3BMN5 Lab Sample ID: 300-5773-3

Date Collected: 07/13/17 12:30 Date Received: 07/14/17 16:20

Matrix: Solid

Dil Initial Batch Batch Final Batch Prepared Method **Prep Type** Type Run **Factor** Amount Amount Number or Analyzed Analyst Lab 8625 Total/NA Prep 3060A 2.5037 g 100 mL 07/19/17 07:08 HR TAL RCH Total/NA Analysis 7196A 8641 07/19/17 08:00 HR TAL RCH 1

Client Sample ID: B3BMP0 Lab Sample ID: 300-5773-4 Date Collected: 07/14/17 10:45

Date Received: 07/14/17 16:20

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3060A			2.5012 g	100 mL	8625	07/19/17 07:08	HR	TAL RCH
Total/NA	Analysis	7196A		1			8641	07/19/17 08:00	HR	TAL RCH

Client Sample ID: B3BMP5 Lab Sample ID: 300-5773-5

Date Collected: 07/14/17 10:45

Matrix: Solid

Date Received: 07/14/17 16:20

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3060A			2.5023 g	100 mL	8625	07/19/17 07:08	HR	TAL RCH
Total/NA	Analysis	7196A		1			8641	07/19/17 08:00	HR	TAL RCH

Lab Sample ID: 300-5773-6 Client Sample ID: B3BMR2 Date Collected: 07/14/17 13:00 **Matrix: Solid**

Date Received: 07/14/17 16:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0210 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		1			8611	07/18/17 18:42	DRM	TAL RCH

Project/Site: F17-009

TestAmerica Job ID: 300-5773-1

SDG: WC2166

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Client Sample ID: B3BMR2 Lab Sample ID: 300-5773-6 Date Collected: 07/14/17 13:00

Matrix: Solid

Date Received: 07/14/17 16:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0210 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		1			8612	07/18/17 18:42	DRM	TAL RCH
Soluble	Leach	DI Leach			5.0210 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		5			8611	07/18/17 20:57	DRM	TAL RCH
Soluble	Leach	DI Leach			5.0210 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		10			8644	07/20/17 13:17	DRM	TAL RCH
Total/NA	Analysis	Moisture		1			8629	07/19/17 09:15	DRM	TAL RCH

Client Sample ID: B3BMP1 Lab Sample ID: 300-5773-7

Date Collected: 07/14/17 10:45 **Matrix: Solid** Date Received: 07/14/17 16:20

Dil Batch **Batch** Initial Final **Batch** Prepared **Prep Type** Type Method Run **Factor Amount** Amount Number or Analyzed Analyst Lab DI Leach Soluble Leach 5.0462 g 50 mL 8608 07/18/17 07:25 DRM TAL RCH Soluble Analysis 300.0 1 8611 07/18/17 18:57 DRM TAL RCH Soluble Leach DI Leach 5.0462 g 50 mL 8608 07/18/17 07:25 DRM TAL RCH Soluble Analysis 300.0 1 8612 07/18/17 18:57 DRM TAL RCH Soluble 8608 07/18/17 07:25 DRM TAL RCH Leach DI Leach 5.0462 g 50 mL 300.0 2 TAL RCH Soluble Analysis 8611 07/18/17 21:12 DRM Total/NA Analysis 1 8629 07/19/17 09:15 DRM TAL RCH Moisture

Client Sample ID: B3BMP6 Lab Sample ID: 300-5773-8 Date Collected: 07/14/17 10:45 **Matrix: Solid**

Date Received: 07/14/17 16:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0290 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		1			8611	07/18/17 19:42	DRM	TAL RCH
Soluble	Leach	DI Leach			5.0290 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		1			8612	07/18/17 19:42	DRM	TAL RCH
Soluble	Leach	DI Leach			5.0290 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		2			8611	07/18/17 21:58	DRM	TAL RCH
Total/NA	Analysis	Moisture		1			8629	07/19/17 09:15	DRM	TAL RCH

Client Sample ID: B3BMN6 Lab Sample ID: 300-5773-9

Date Collected: 07/13/17 12:30 **Matrix: Solid** Date Received: 07/14/17 16:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0288 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		1			8611	07/18/17 19:57	DRM	TAL RCH
Soluble	Leach	DI Leach			5.0288 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		1			8612	07/18/17 19:57	DRM	TAL RCH

Project/Site: F17-009

TestAmerica Job ID: 300-5773-1 SDG: WC2166

Lab Sample ID: 300-5773-9

Matrix: Solid

Matrix: Solid

Date Collected: 07/13/17 12:30 Date Received: 07/14/17 16:20

Client Sample ID: B3BMN6

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			8629	07/19/17 09:15	DRM	TAL RCH

Lab Sample ID: 300-5773-10 Client Sample ID: B3BMM9

Date Collected: 07/13/17 09:30

Date Received: 07/14/17 16:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0299 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		1			8611	07/18/17 20:12	DRM	TAL RCH
Soluble	Leach	DI Leach			5.0299 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		1			8612	07/18/17 20:12	DRM	TAL RCH
Total/NA	Analysis	Moisture		1			8629	07/19/17 09:15	DRM	TAL RCH

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 300-8608/1-A

Lab Sample ID: LCS 300-8608/2-A

Matrix: Solid

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0119 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		1			8611	07/18/17 18:12	DRM	TAL RCH
Soluble	Leach	DI Leach			5.0119 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		1			8612	07/18/17 18:12	DRM	TAL RCH

Client Sample ID: Method Blank	Lab Sample ID: MB 300-8625/1-A
Date Collected: N/A	Matrix: Solid
Date Received: N/A	

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3060A			2.5 g	100 mL	8625	07/19/17 07:08	HR	TAL RCH
Total/NA	Analysis	7196A		1			8641	07/19/17 08:00	HR	TAL RCH

Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0314 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		1			8611	07/18/17 18:27	DRM	TAL RCH
Soluble	Leach	DI Leach			5.0314 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		1			8612	07/18/17 18:27	DRM	TAL RCH

Project/Site: F17-009

TestAmerica Job ID: 300-5773-1

SDG: WC2166

Client Sample ID: Lab Control Sample

Date Collected: N/A Date Received: N/A

Lab Sample ID: LCS 300-8625/2-A

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3060A			2.5 g	100 mL	8625	07/19/17 07:08	HR	TAL RCH
Total/NA	Analysis	7196A		1			8641	07/19/17 08:00	HR	TAL RCH

Lab Sample ID: 300-5773-1 MS Client Sample ID: B3BMR1

Date Collected: 07/14/17 13:00 **Matrix: Solid**

Date Received: 07/14/17 16:20

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3060A			2.5069 g	100 mL	8625	07/19/17 07:08	HR	TAL RCH
Total/NA	Analysis	7196A		1			8641	07/19/17 08:00	HR	TAL RCH

Client Sample ID: B3BMR1 Lab Sample ID: 300-5773-1 MSI

Date Collected: 07/14/17 13:00 **Matrix: Solid**

Date Received: 07/14/17 16:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3060A			2.5009 g	100 mL	8625	07/19/17 07:08	HR	TAL RCH
Total/NA	Analysis	7196A		20			8641	07/19/17 08:00	HR	TAL RCH

Client Sample ID: B3BMP1 Lab Sample ID: 300-5773-7 MS **Matrix: Solid**

Date Collected: 07/14/17 10:45

Date Received: 07/14/17 16:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.0144 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		1			8611	07/18/17 19:12	DRM	TAL RCH
Soluble	Leach	DI Leach			5.0144 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		1			8612	07/18/17 19:12	DRM	TAL RCH
Soluble	Leach	DI Leach			5.0144 g	50 mL	8608	07/18/17 07:25	DRM	TAL RCH
Soluble	Analysis	300.0		2			8611	07/18/17 21:27	DRM	TAL RCH

Laboratory References:

TAL RCH = TestAmerica Richland, 2800 George Washington Way, Richland, WA 99352, TEL (509)375-3131



Project/Site: F17-009

TestAmerica Job ID: 300-5773-1

SDG: WC2166

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL RCH
7196A	Chromium, Hexavalent	SW846	TAL RCH
Moisture	Percent Moisture	EPA	TAL RCH

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL RCH = TestAmerica Richland, 2800 George Washington Way, Richland, WA 99352, TEL (509)375-3131



Project/Site: F17-009

TestAmerica Job ID: 300-5773-1 SDG: WC2166

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-5773-1	B3BMR1	Solid	07/14/17 13:00	07/14/17 16:20
300-5773-2	B3BMM8	Solid	07/13/17 09:30	07/14/17 16:20
300-5773-3	B3BMN5	Solid	07/13/17 12:30	07/14/17 16:20
300-5773-4	B3BMP0	Solid	07/14/17 10:45	07/14/17 16:20
300-5773-5	B3BMP5	Solid	07/14/17 10:45	07/14/17 16:20
300-5773-6	B3BMR2	Solid	07/14/17 13:00	07/14/17 16:20
300-5773-7	B3BMP1	Solid	07/14/17 10:45	07/14/17 16:20
300-5773-8	B3BMP6	Solid	07/14/17 10:45	07/14/17 16:20
300-5773-9	B3BMN6	Solid	07/13/17 12:30	07/14/17 16:20
300-5773-10	ВЗВММ9	Solid	07/13/17 09:30	07/14/17 16:20

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July 31, 2017

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-5773-1 SDG Number: WC2166

List Source: TestAmerica Richland

Login Number: 5773 List Number: 1

Creator: Rogers, Angeline D

Creator: Rogers, Angeline D		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	